

REMARKS

Claims 2-3, 12, 14, 17, 21-22 and 24-26 remain pending in the application with the present amendment. Applicants affirm the election of the invention recited in the Group II claims, namely claims 2-5, 11-12, 14-17 and 20-24. Claims 4, 5, 15, 16, and 23 are canceled in favor of the amendments made to claims 25 and 26 herein. Claims 11 and 20 are canceled herein without prejudice to reduce the number issues which remain for appeal, in case of continued rejection of the claims as amended herein.

In the Office Action, all claims were rejected under 35 U.S.C. §103 as being obvious over U.S. Patent No. 5,278,839 to Matsumoto et al. ("*Matsumoto*"), in view of U.S. Patent No. 6,519,735 to Holman et al. ("*Holman*"), in view of U.S. Patent No. 5,748,543 to Lee et al. ("*Lee*"), and further in view of U.S. Patent No. 6,532,181 to Saito ("*Saito*"). For the reasons set forth below, Applicants submit that the presently pending claims are distinguished from the references cited by the Examiner. Reconsideration and withdrawal of the rejections are respectfully requested.

Claim 25 recites a method for identifying a failed memory element within an integrated circuit memory and repairing the memory. A busy signal is asserted for one bank in which a failed memory element has been identified. As amended herein, claim 25 now recites *electrically activating fusible elements within said integrated circuit including elements selected from the group consisting of fuses and antifuses to electrically alter circuit connections* of the integrated circuit memory to replace the failed memory element in the one bank with a redundancy element while asserting the busy signal and providing read or write access to other banks.

The combination of references cited by the Examiner neither teaches nor suggests these features of the invention recited in claim 25. The Examiner cites the combination of *Matsumoto* and *Holman* as teaching identification of failures using storage and retrieval of data bits with ECC check bits, and cites *Lee* as teaching repair of a failed element with a replacement element after device packaging. However, none of the references cited by the Examiner teaches or suggests electrically activating fusible elements to alter circuit connections of an integrated circuit memory to replace a failed memory element in one bank with a redundancy element while asserting a busy signal and servicing at least one of read or write access requests for banks other than the one bank.

Saito, newly cited by the Examiner, merely describes a memory (EEPROM) which permits a data write or erase operation to be carried out in one bank while carrying out a data read operation in another bank. However, *Saito* neither teaches nor suggests the aforementioned features of the invention. *Saito* merely describes the re-routing of addresses and data bit signals to and from an input output interface and "usual memory cell arrays" and "redundant column cell arrays" (col. 5, line 15 *et seq.*). The re-routing is performed at the time of read or write/erase access to the memory, using a defective address storing circuit and an address comparator (col. 5, lines 39-54) which detects the stored defective address. The defective address storing circuit can be, for example, a fuse circuit. (col. 5, lines 39-40). *Saito* neither teaches nor suggests activating the fuses of the defective address storing circuit as recited in claim 25, *i.e.*, to replace a newly identified failed element of one bank with a redundancy

element while servicing access to memory requests in a different bank. Moreover, none of the other cited references of record teaches or suggests this feature.

Claim 26 contains similar recitations and is submitted to be allowable at least on the same basis, as well.

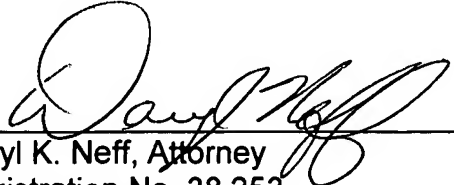
Support for the present amendments is provided, *inter alia*, at page 9, line 7 through page 11, line 4; page 12, lines 12 through 16; and page 12, line 20 through page 13, line 3 of the Specification.

If for any reason the Examiner has any question regarding the content of this amendment or the allowability of the presently pending claims, he is respectfully requested to contact the Applicants' undersigned attorney at the telephone number indicated below.

The present amendment is submitted with a petition for two-month extension of time to respond, together with an extra copy and authorization to charge the Deposit Account No. 09-453 of the Assignee for the required fee. If any additional fee is required for submission of this amendment, please charge the same account. If there is an overpayment, please credit the same account.

Respectfully submitted,
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By:


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